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Express Mail" mailing label Number <u>EE209745086US</u>

Date of Deposit November 13, 2001

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Washington, D.C. 20231. Barbara Haggerty

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## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Patent Application Of: Gan et al.

For: Pellet Process For Double Current Collector

Screen Cathode Preparation

the specification of which is being transmitted herewith.

Assistant Commissioner of Patents Washington, D.C. 20231

## INFORMATION DISCLOSURE STATEMENT Pursuant to 37 CFR 1.56

1. Applicants submit herewith patents, publications or other information of which they are aware, which they believe may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR 1.56.

The filing of this Information Disclosure Statement (IDS) shall not be construed as a representation that a search has been made (37 CFR 1.56(g)), an admission that the information cited is, or is considered to be material to patentability or that no other material information exists.

4-603

Page 2 of 6

04645.0842

IDS For: Pellet Process For Double Current Collector

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Inventor: Gan et al.

The filing of this IDS shall not be construed as an admission against interest in any manner (Notice of Jan. 9, 1992, 1135 O.G. 13-25, at 25).

- 2. Attached is Form PTO-1449. Legible copies of all items listed accompany this IDS.
- 3. A concise explanation of the possible relevance of the listed information items is as follows:

## Patents:

U.S. Patent 5,639,577 to Takeuchi et al. shows a nonaqueous electrochemical cell having a mixed cathode comprising a mixture such as CSVO, powdered PTFE binder, and graphite and carbon black conductive diluents. The cathode active admixture further comprises a carbonaceous second cathode active constituent prepared from carbon and fluorine (CFx)n. The materials appear to be mixed into each other in the form of powders or pellets and are formed into a free-standing sheet prior to being contacted with a current collector to form the cathode electrode. Cathode components for incorporation into the cell may also be prepared by rolling, spreading or pressing the cathode active admixture onto a suitable current collector.

Page 3 of 6

04645.0842

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U.S. Patent 5,580,685 to Schenk discloses a method for manufacturing battery grids including a laminated grid plate comprising two electrically conductive reticula and a scrim bonded therebetween. The scrim, which may comprise a conducted metal, is sandwiched between and bonded to grid strip segments following formation on a continuous casting machine. A heated scrim is passed into a hopper and the hopper is filled with a binder material provided in a granular or powder form. The coated scrim exists the hopper and is then laid down onto a still hot battery grid strip segment of a dual grid strip; it is folded over the grid strip segment and is mechanically compressed.

- U.S. Patent 5,714,283 to Briscoe et al. teaches a current separator system wherein a metal particle retainer screen is produced by a microporous sintering process. The screens may be of sintered cold compacted powder, of sintered plasma sprayed stainless steel, or molybdenum powder.
- U.S. Patent 5,489,492 to Asami et al. relates to a composite sheet electrode utilizing lamination techniques in the manufacturing process. The composite sheet electrode comprises a composite sheet bonded to a current collecting material layer with a bonding layer.

Page 4 of 6

04645.0842

IDS For: Pellet Process For Double Current Collector

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U.S. Patent 5,478,666 to Plichta et al. shows an electrochemical cell incorporating intercalated petroleum coke as the anode. A cell is prepared in an argon filled dry box. Powdered LiAl is pressed in a 13 mm diameter steel die to 4,000 pounds pressure. A powdered electrolyte/separator mixture consisting of LiCl-LiBr-Li-F and MgO is pressed on top of the LiAl pellet, in the same die, to a total pressure of 10,000 pounds. Powdered petroleum code is then pressed separate from the other pellets in a similar manner to 4,000 pounds and stacked on top of the electrolyte layer. The cell stack is assembled into a spring loaded cell jig, that is affixed with molybdenum current collectors.

U.S. Patent 4,166,870 to Henson teaches a process for manufacturing a porous electrode support structure for a zinc halogen electric cell. Compressed acetylene black, water and acetone is mixed to form a first mixture. A second mixture is formed from latex and water. The second mixture is added to the first mixture to produce a porous crumbly material which is applied to a sheet of expanded anodizable metal. The crumbly mix layer is applied to the metal sheet under pressure to produce an electrode.

Page 5 of 6

04645.0842

IDS For: Pellet Process For Double Current Collector

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4. The person making this statement is the agent who signs below, who makes this statement on the information supplied by the inventors and the information in the agent's file.

Respectfully Submitted,

Rv. •

Michael F. Scalise Reg. No. 34,920

HODGSON RUSS LLP
One M&T Plaza - Suite 2000
Buffalo, New York 14203-2391
(716) 856-4000
November 13, 2001

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